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ANH SI LE

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EXAMINER

OWENS JR, HOWARD V

ART UNIT

PAPER NUMBER

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 19

Application Number: 09/276,014  
Filing Date: March 25, 1999  
Appellant(s): SI LE, ANH

William E. McShane  
For Appellant

**MAILED**  
**JUN 05 2002**  
**GROUP 2900**

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2-20-02.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

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**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is incorrect. Upon further review, claim 13 is no longer rejected under 102(b); however, the rejection of claim 13 under 103(a) is maintained.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 1, 2, 4-12 and 13 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

5,436,329	CABOCHE	7-1995
5,314,701	MENTINK	5-1994

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**35 U.S.C. 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Caboche, U.S. Patent No. 5,436,329.

Claims 1, 2, 4-12 are drawn to a composition comprising hydrogenated saccharides (hydrogenated monosaccharides, hydrogenated disaccharides, hydrogenated trisaccharides, hydrogenated oligosaccharides and hydrogenated polysaccharides) of varying composition.

Caboche teach a composition containing hydrogenated saccharides wherein the DP values overlap or anticipate those of the claimed invention (see column 2, lines 61 - column 3, line 30). Caboche also teach the inclusion of a crystallisable polyol such as ISOMALT (see table 1) in the composition and the use of this composition in confectionary products (see example 6 and columns 1-2).

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**35 U.S.C. 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mentink et al.(Mentink), U.S. Patent No., 5,314,701.

Mentink et al. teach a sugar free hard candy containing hydrogenated saccharides wherein the DP values and proportions of the saccharides are analogous to those set forth in the instant invention (see column 6, line 29 - column 7, line 68) also containing a crystallisable polyol such as isomalt (see example 1) wherein the transition glass temperature (tgc) is between 60 and 90 C (col. 6, line 66) analogous to the tgc set forth in the instant claims. Mentink teaches that "hard candies" containing these proportions has the advantages of good thermal stability and malleability, low hygroscopic nature and also anticaries properties (col. 5, line 43 – col. 6, line 19). Appellant's inclusion of an acidulant in claim 13 is not seen to be novel over the prior art as the use of acidulants such as malic acid, citric acid or tartaric acid in this food art is common practice.

Although Mentink sets forth disaccharides at a composition of 35% Mentink does not teach disaccharides at a composition of 34.3%. However, one of skill in the art would not recognize a statistically significant difference between 34.3% and 35%; moreover, appellant has not set forth any unexpected results from that seen in the composition

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wherein the disaccharides are .7% more in composition. One of skill in the art would have the same expectation of success in a composition wherein the disaccharide composition was .7% less than that known in the prior art.

It would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made to combine the monosaccharides, disaccharides, oligosaccharides and polysaccharides in a composition with the concentrations claimed.

A person of ordinary skill in the art would have been motivated to produce the composition as claimed given the art recognized benefits of a sweetening composition that has good thermal stability and malleability, low hygroscopic nature and also has anticaries properties.

**(11) Response to Argument**

102(b) – Caboche, U.S. No. 5,436,329

Appellant's arguments that the Caboche reference is too broad is not persuasive. Appellant does not dispute the fact that the composition of Caboche teaches the monosaccharides, disaccharides, oligosaccharides and polysaccharides in concentrations that overlap with appellants. Appellant's response is silent as to why a reference which contains the same concentration ranges of monosaccharides, disaccharides, oligosaccharides and polysaccharides in a composition as that of applicant is not anticipatory. For instance, the examiner cited (column 2, lines 61 - column 3, line 30) wherein the range(s) of .1 to 75% hydrogenated monosaccharides, .1 to 96% hydrogenated disaccharides, 11 to 96% hydrogenated monosaccharides and

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disaccharides, and a balance of hydrogenated oligo and polysaccharides which can amount to less than or equal to 73% is not anticipatory for the ranges as claimed by appellant. An assertion that the reference is broad does not overcome the fact that the elements of the claims are taught by the reference.

Appellant also argues that the "specific teachings of the Caboche patent that are contained in the working examples do not contain a single formulation that falls within the scope of the present claims". This argument is specifically targeted to whether Caboche teaches Elements C, D and E of claim 1. As cited previously, Caboche sets forth these ranges in column 2, line 66 – col.3, line 10; moreover, Caboche provides working examples in table 1, where hydrogenated trisaccharides at 4.4 wt % anticipate Element C's range of less than 15 wt%, hydrogenated oligosaccharides of DP from 4 to 10 at 13.3 wt %, anticipate Element D's claimed range of less than 30 wt% and hydrogenated polysaccharides ranging from 15.5 wt % to 29 wt %, anticipate Element E's claimed range of 14 wt% to 38 wt%. Thus the teachings of Caboche clearly provide the individual species or generic ranges that fall within the claimed range(s) and therefore anticipate the claims.

As cited in the statement of the issues, claim 13 has been withdrawn as being rejected under 102(b); however, the rejection of claim 13 under 103(a) is maintained and discussed below.

103(a)

Appellant argues that the formulations set forth in Mentink et al. wherein the DP values and proportions of the saccharides analogous to those set forth in the instant invention (see column 6, line 29 - column 7, line 68) are not specific enough to anticipate the present claims. However, applicant has set forth a broad range of wt% in the present claims for each DP wherein the wt% of each DP overlaps for components A-E of claim 1 to make a non-specific composition totaling presumably 100%. However, using the minimum wt% of each component would not give a total of 100%, thus the open claim language of comprising indicates that there is a wide degree of latitude for what additional agents make up the composition. Clearly appellant assumes that one of skill in the art will arrive at the claimed invention through experimentation with the broad ranges as long as the wt% for each component is obeyed, thus there maybe as little as .5% for component B and 38% for component E. Mentink has set forth ranges wherein the DP values and proportions of the saccharides analogous to those set forth in the instant claims (col.6, lines 40-60).

Component	DP	wt. %	Mentink wt%
A	1	2.6-7	1-17
B	2	<34.3	30-90
C	3	<15	10-30
D	4-10	<30	5-25
E	>11	<38	>1-54

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Again, an assertion that the reference is broad does not overcome the fact that the elements of the claims are taught by the reference, especially when the claims are broad. Moreover, Mentink has set forth that the composition contains a crystallisable polyol such as isomalt (see example 1) wherein the transition glass temperature (tgc) is between 60 and 90 C (col. 6, line 66) analogous to the tgc set forth in the instant claims. Finally, points of novelty asserted by appellant in association with these compositions and ranges thereof, such as stability at higher temperatures (p. 14, line 18 of spec.) and stability at room temperatures with significantly higher water content (p. 14, lines 20-22 of spec.), have been taught with the compositions of Mentink as it teaches that "hard candies" containing these proportions has the advantages of good thermal stability.... and low hygroscopic nature (col. 5, line 43 – col. 6, line 19).

Appellant argues that Mentink does not encompass the presently claimed hydrogenated starch hydrolysate (HSH) wherein there is less than 34.3% of polymers with a DP=2. Appellant claims that Mentink calls for a range of 35 – 90%. However, the teachings of Mentink are not limited to 35%, further review of Mentink shows that Mentink teaches that the lower limit of wt% for polymers with a DP=2 is actually 30%, see column 6, lines 24 – 29, wherein Mentink teaches a preferred embodiment is to have more than 30% of molecules having a DP equal to 2. Thus the teachings of Mentink encompass polymers wherein the DP=2 at a wt% of less than the claimed 34.3 wt%.

Appellant argues that with respect to claim 13, there is no teaching in this reference of powder particles comprising a mixture of acidulants with the HSH. The examiner had

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previously argued that the inclusion of acidulants within hard candies or HSH was routine to the art. Applicant subsequently argued that this was merely the opinion of the examiner and further asserted that the inclusion of this acidulant is novel. However, applicant's own specification admits to the fact that the inclusion of acidulants is routine in the prior art and supports the examiner's previous statement. Note, in the Description of the Prior Art, p. 2, lines 6-18, specifically lines 14-15, :

"Generally, sugar-free hard boiled sweets are manufactured by boiling a mixture of polyols.....The molten mass which is obtained is then cooled and cast or deposited into moulds or formed on rolls or by extrusion after the addition of various ingredients, such as flavorants, colorants, intense sweeteners, fillers, **acidulants**.....".

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

In accordance with factor no. 4, appellant's acknowledgement that the prior art has recognized the use of acidulants within the processing of these sugar free hard candies is clearly objective evidence which indicates that the use of acidulants, such as malic acid, would be obvious to one of skill in the art and is therefore, not novel. Appellant claims that the composition of matter does not generally claim the use of an acidulant in

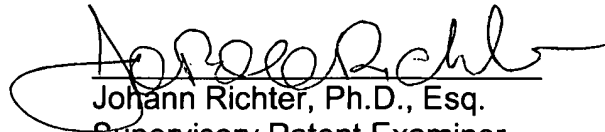
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combination with HSH of claim 1; however, the claim recites that the encapsulation of the acidulants comprises the HSH of claim 1. The open claim language of "comprising" does not provide for a composition wherein the HSH and the acidulant are separate, moreover, even assuming *arguendo* that the composition separates the acidulant from the HSH, appellant's specification uses the acidulant as a secondary ingredient commensurate to its use in the prior art (along with other secondary ingredients such as vitamins, plant extracts, fillers intense sweeteners), wherein it is added to the composition blend, p. 11, lines 19-24. The objective evidence present in the specification clearly demonstrates that what appellant terms as "encapsulation" is merely the addition of the acidulent (powdered malic acid) to the molten HSH blend (see Example 1, p. 14 for example), which is synonymous with appellant's acknowledged state of the art with regards to the addition of secondary ingredients to sugar free hard boiled formulations.

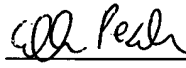
For the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,

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May 20, 2002

  
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